

Fig. 1

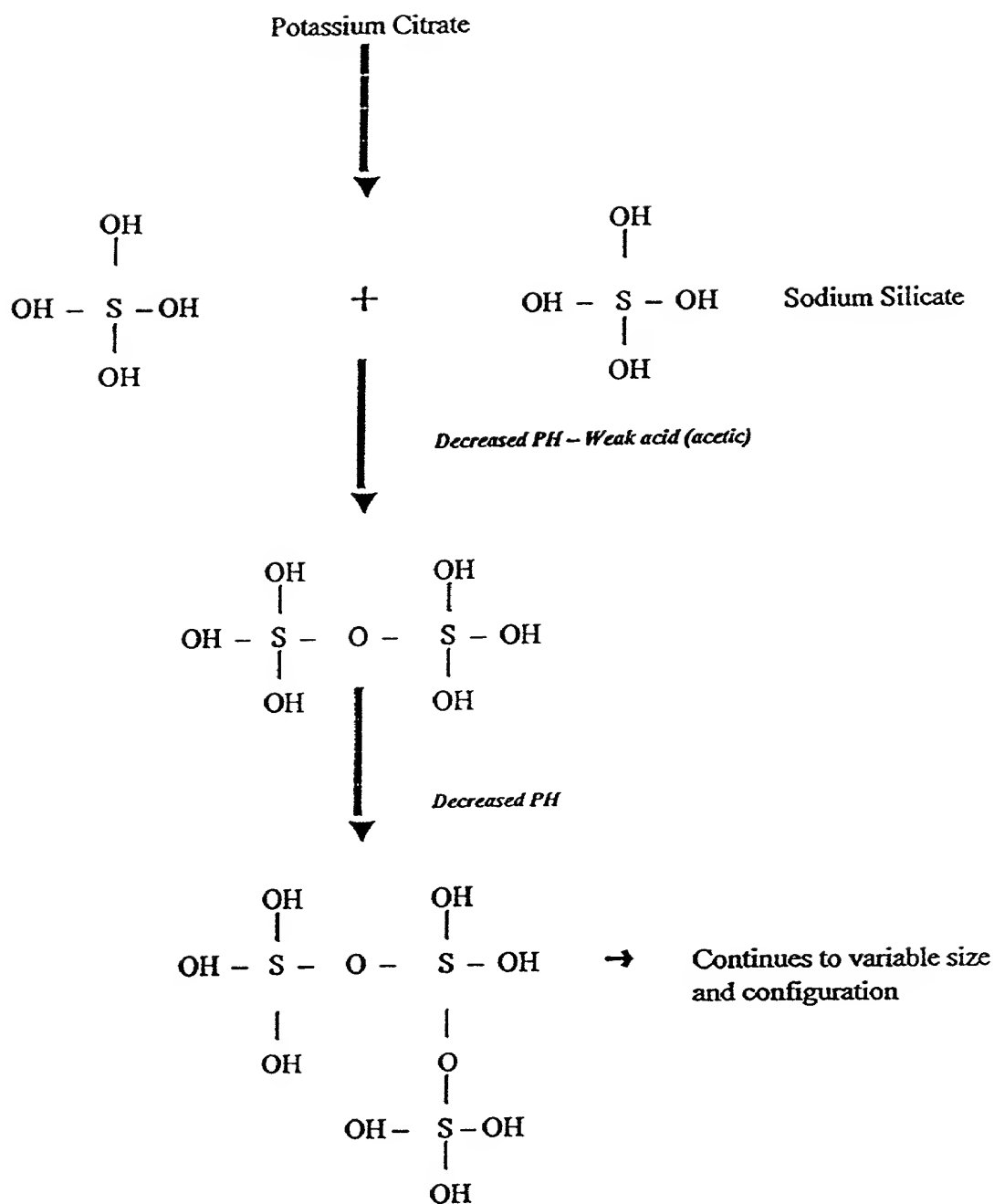
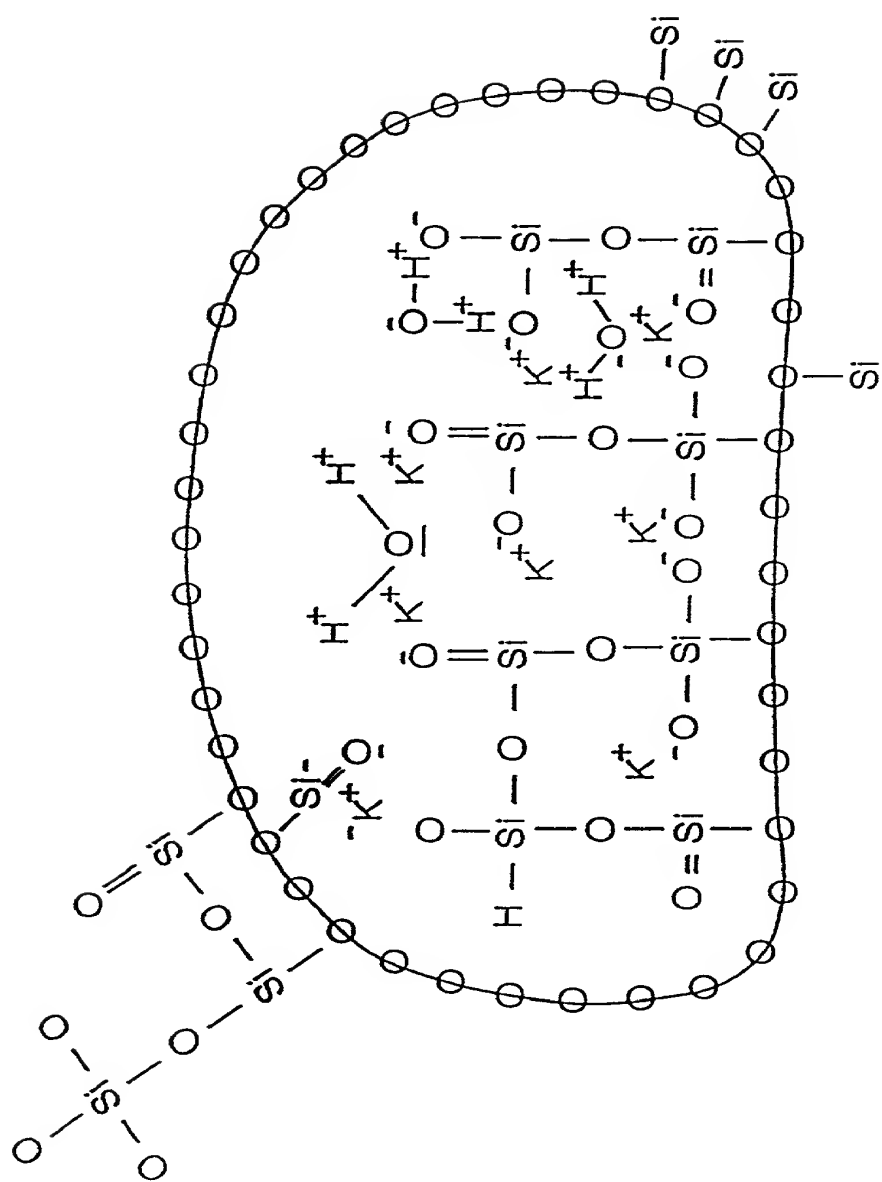


Fig. 2



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५६

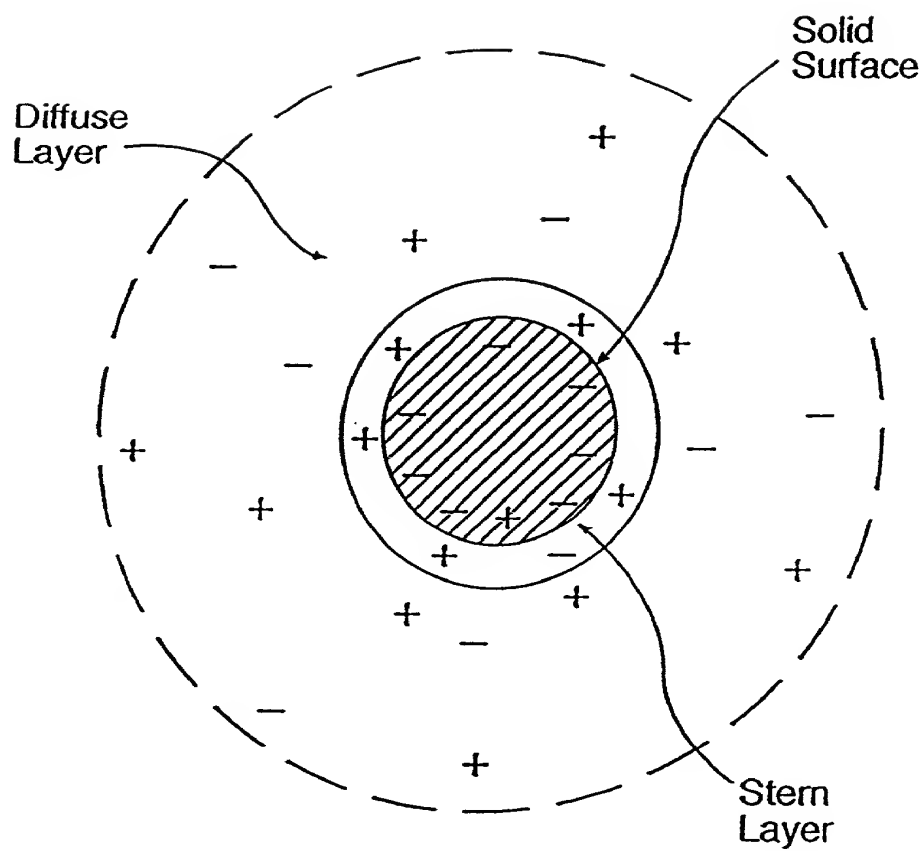


FIG. 4

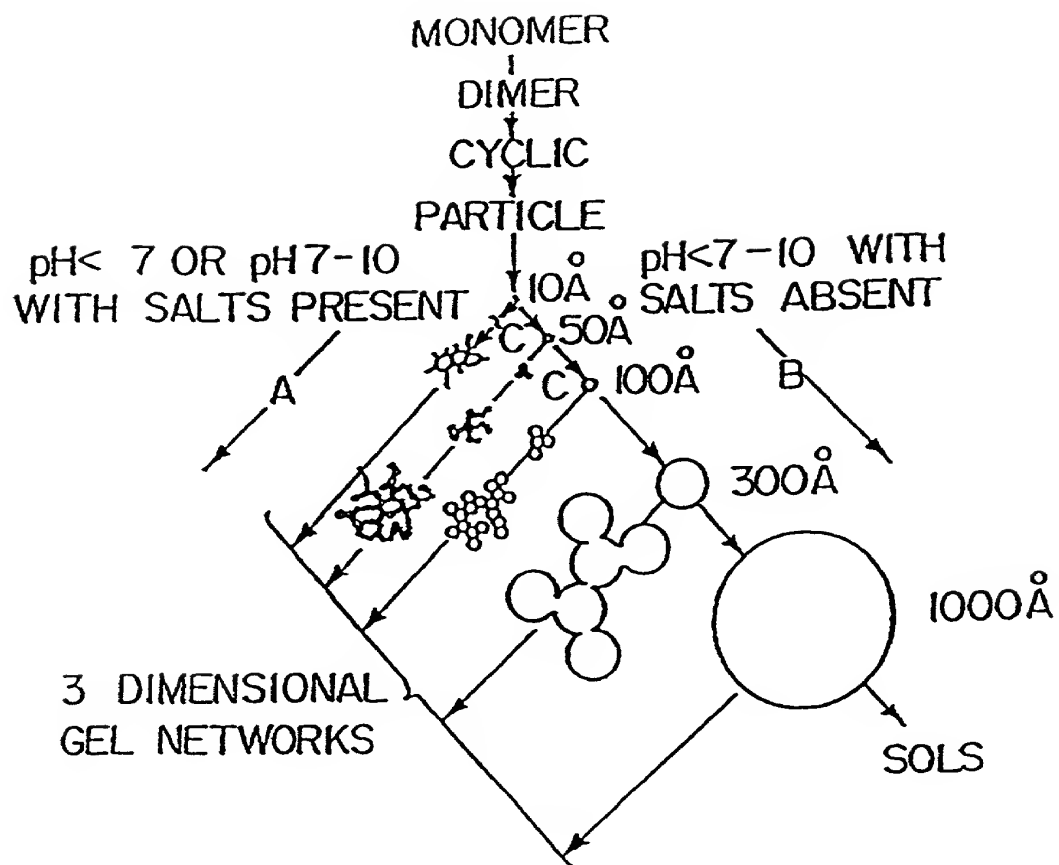


FIG. 5

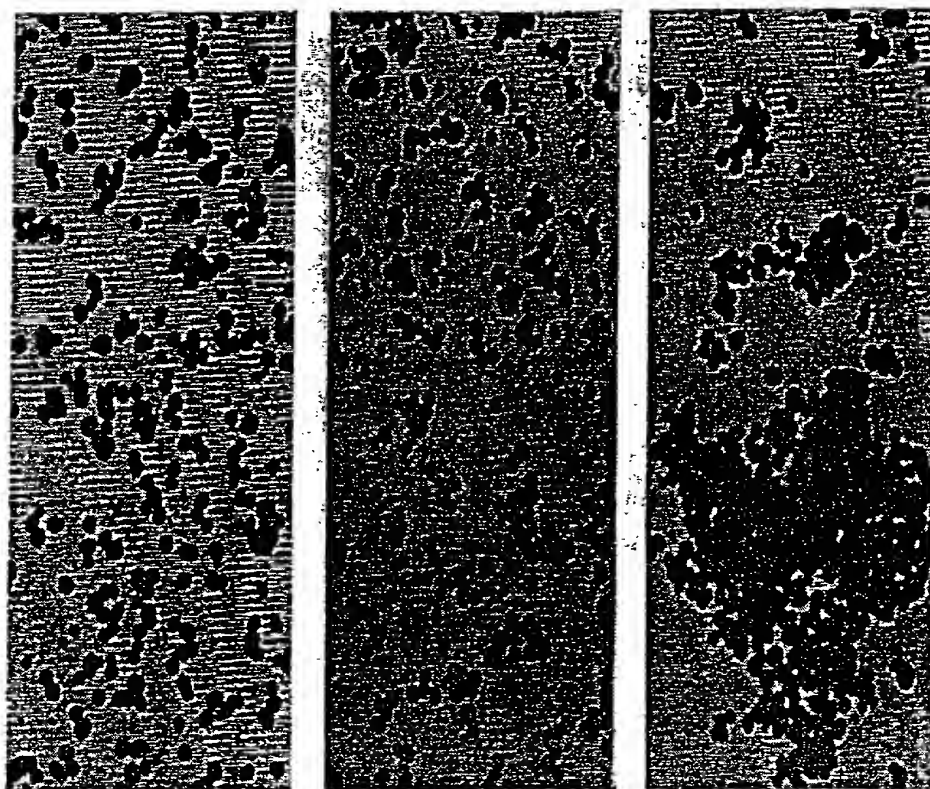
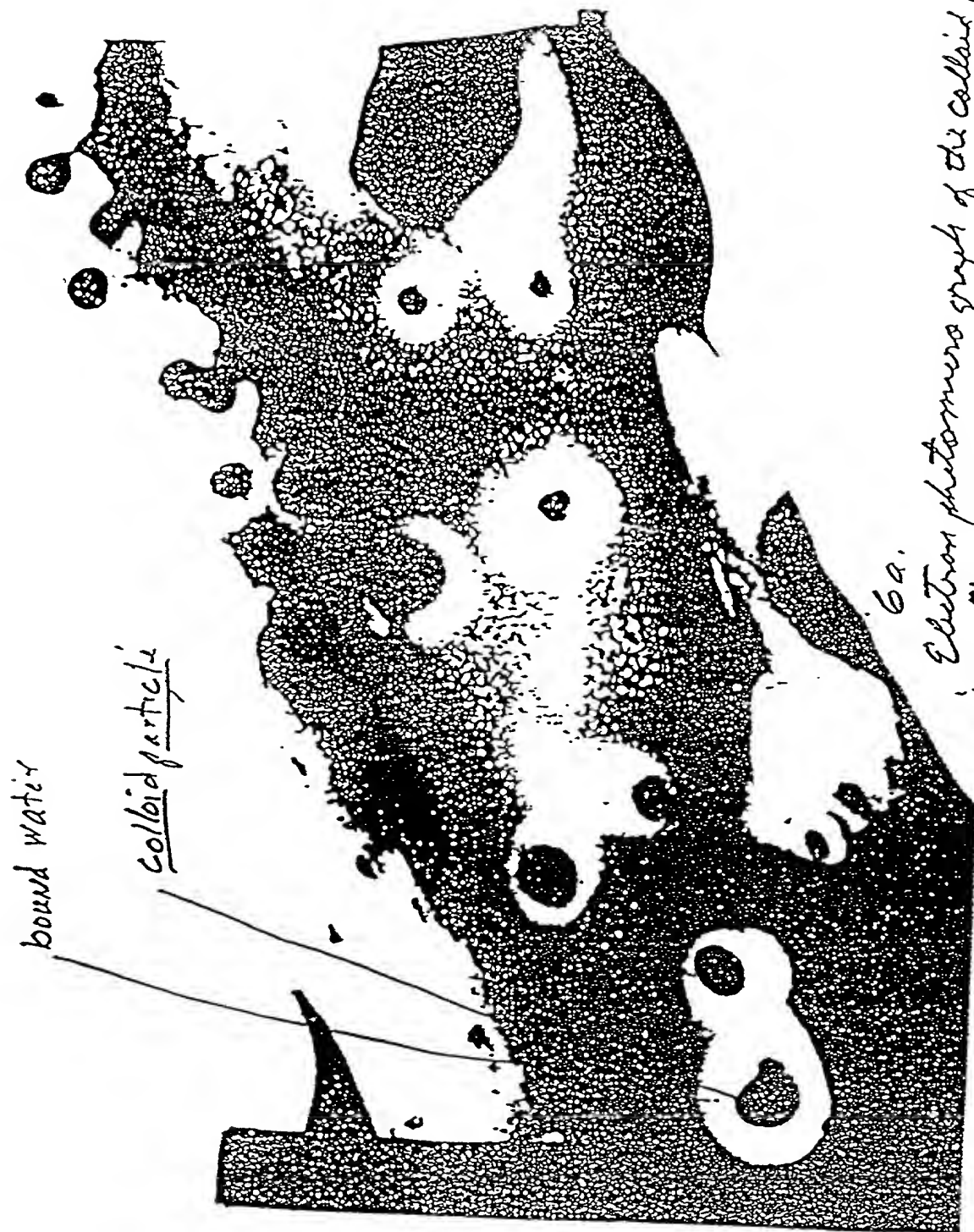


FIG. 26.—Electron micrographs showing stages of aggregation of 35 millimicron silica particles: *left*, colloidal aggregates; *center*, aggregates approaching colloidal size; *right*, supercolloidal aggregates or precipitate.

FIG. 6



6a.

Electron photomicrograph of the colloid of the
invention.
5a

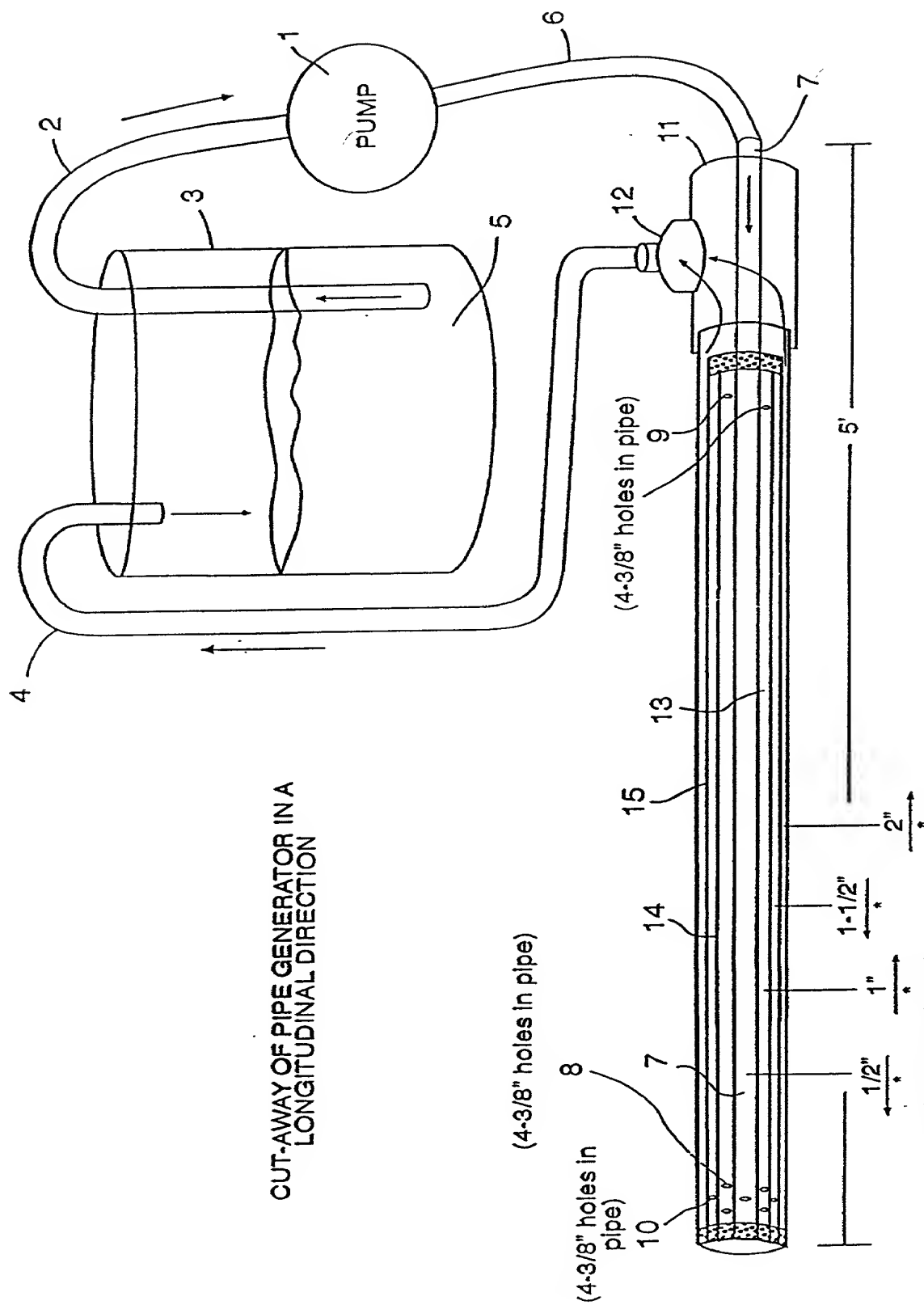
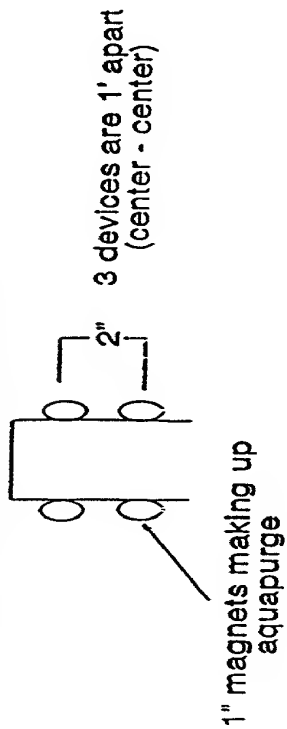
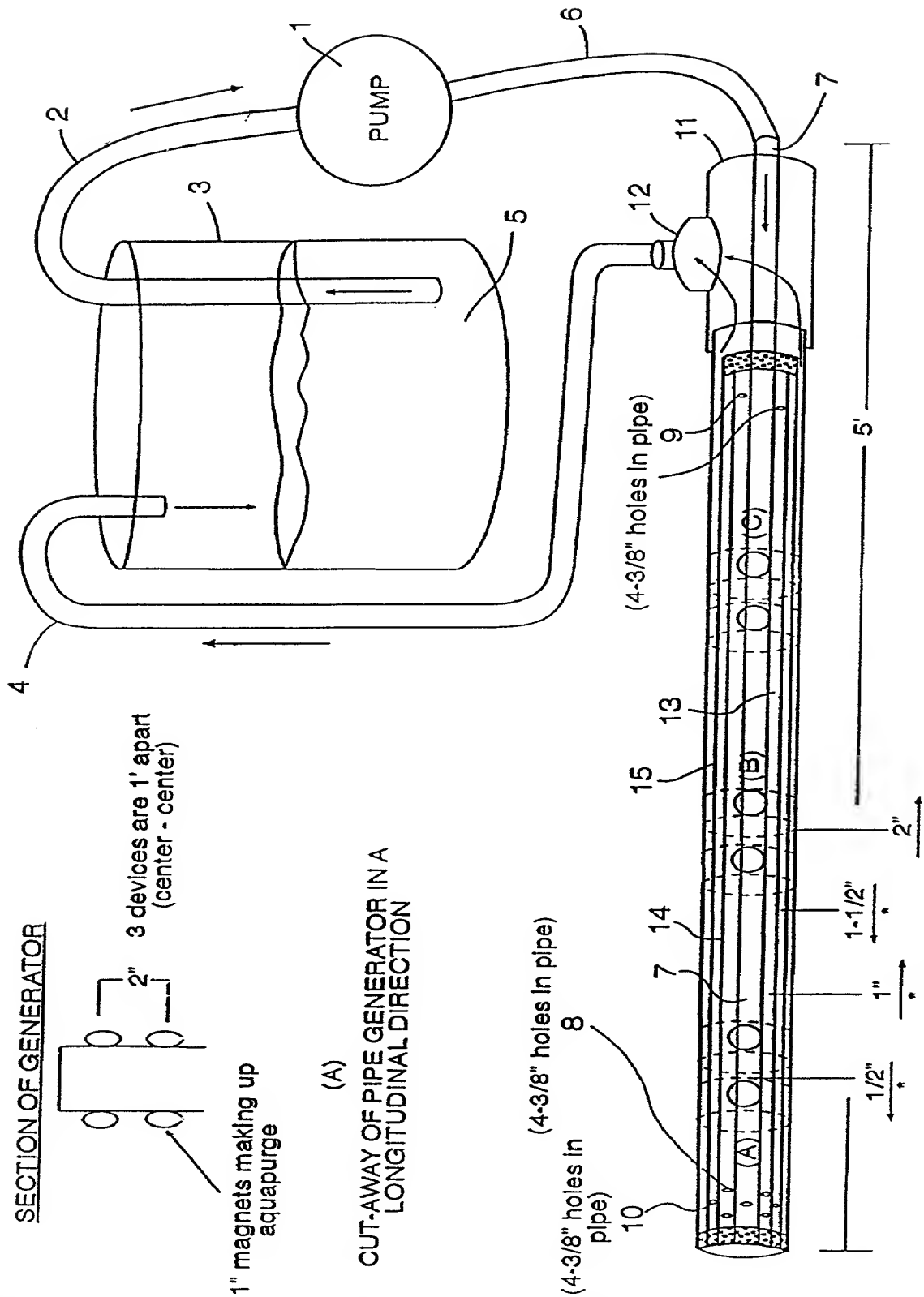


FIG. 7

SECTION OF GENERATOR



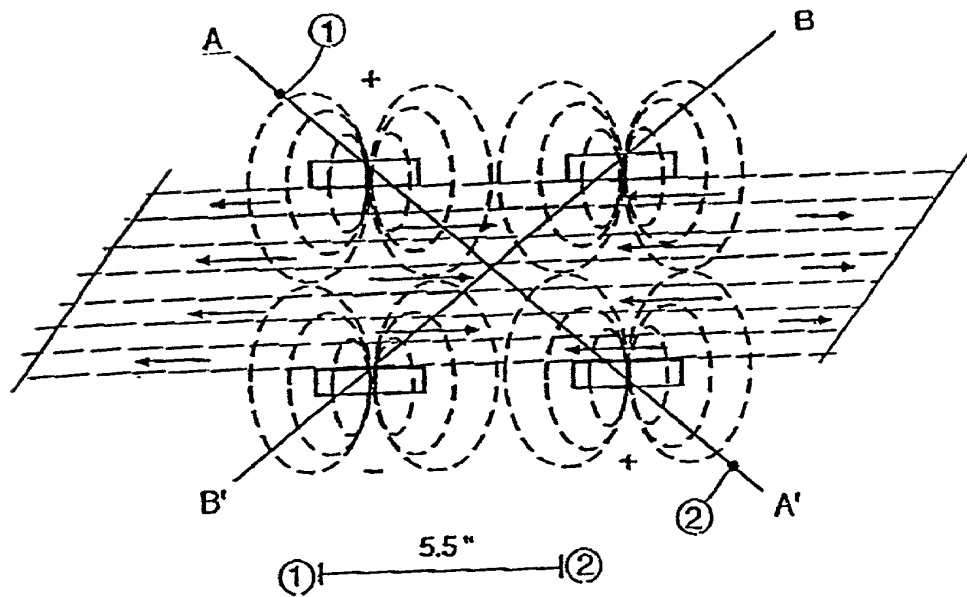
(A) CUT-AWAY OF PIPE GENERATOR IN A LONGITUDINAL DIRECTION



*low direction and pipe size

FIG. 8

Cross sectional view of counter current generator of the invention
with lines A-A' and B-B' noted for measurement purposes.



Plot of Gradients in "z" axis

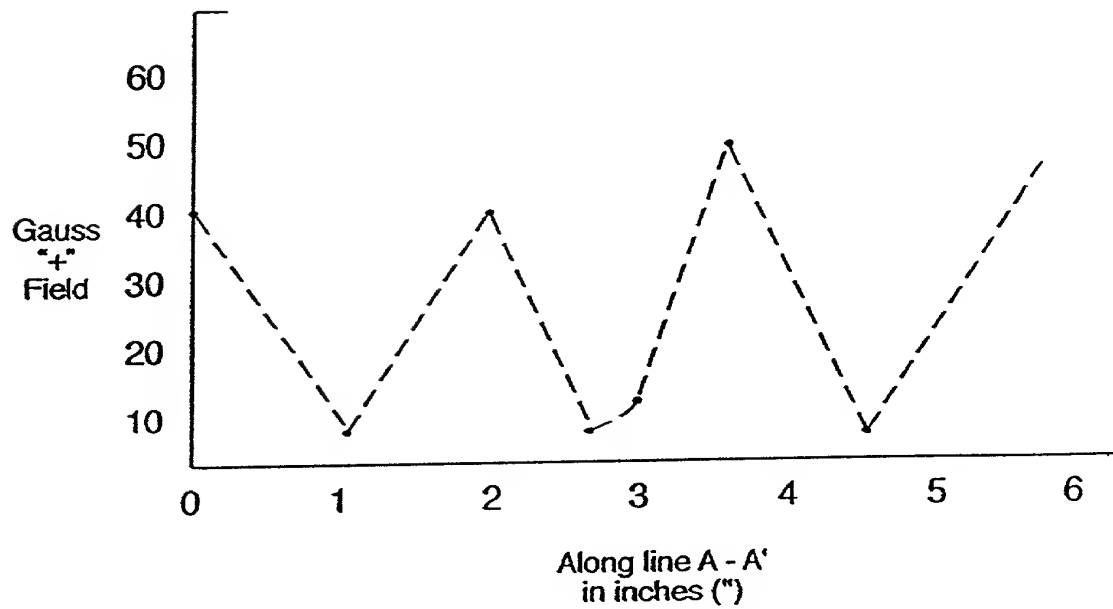


FIG. 9

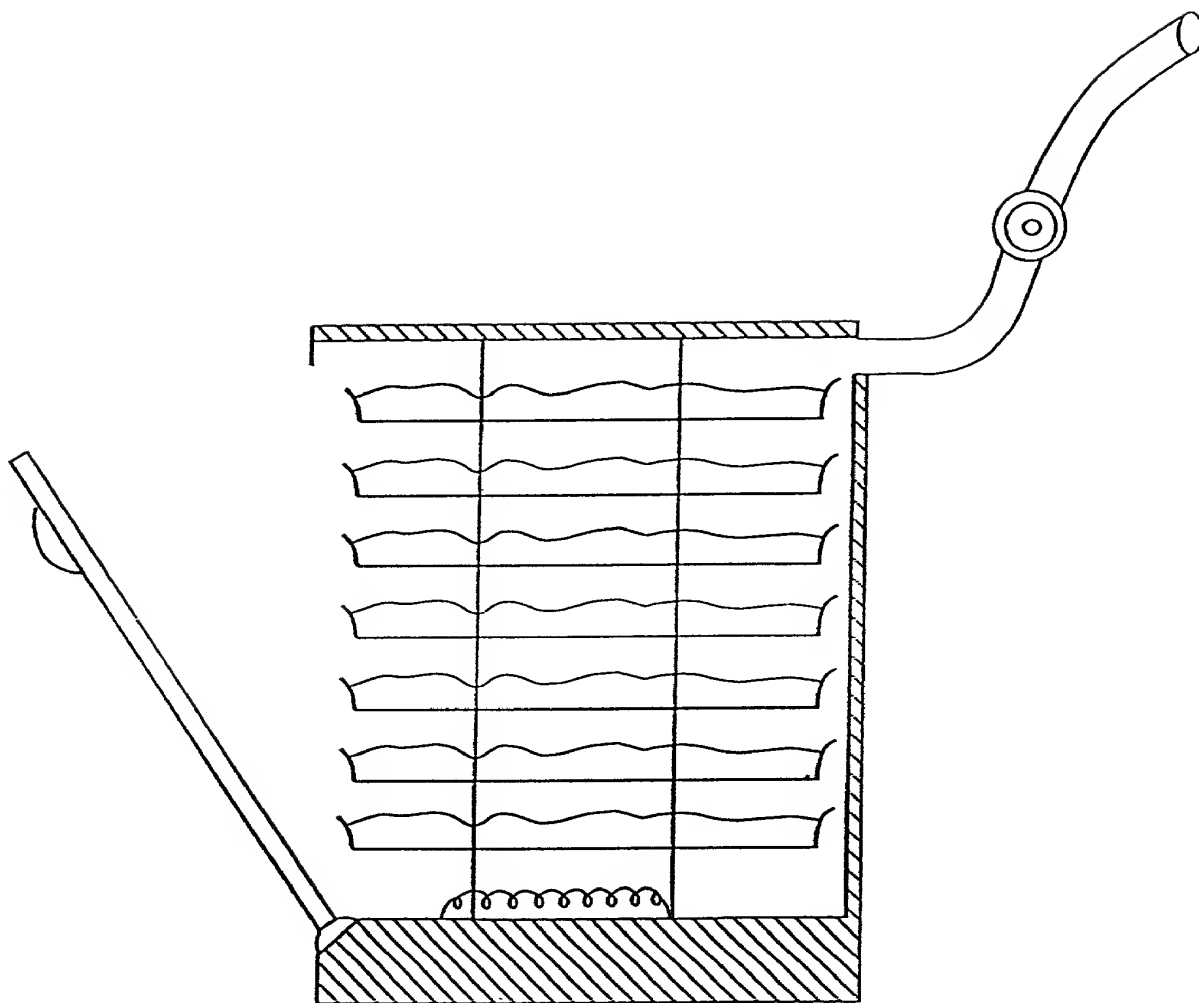


FIG. 10

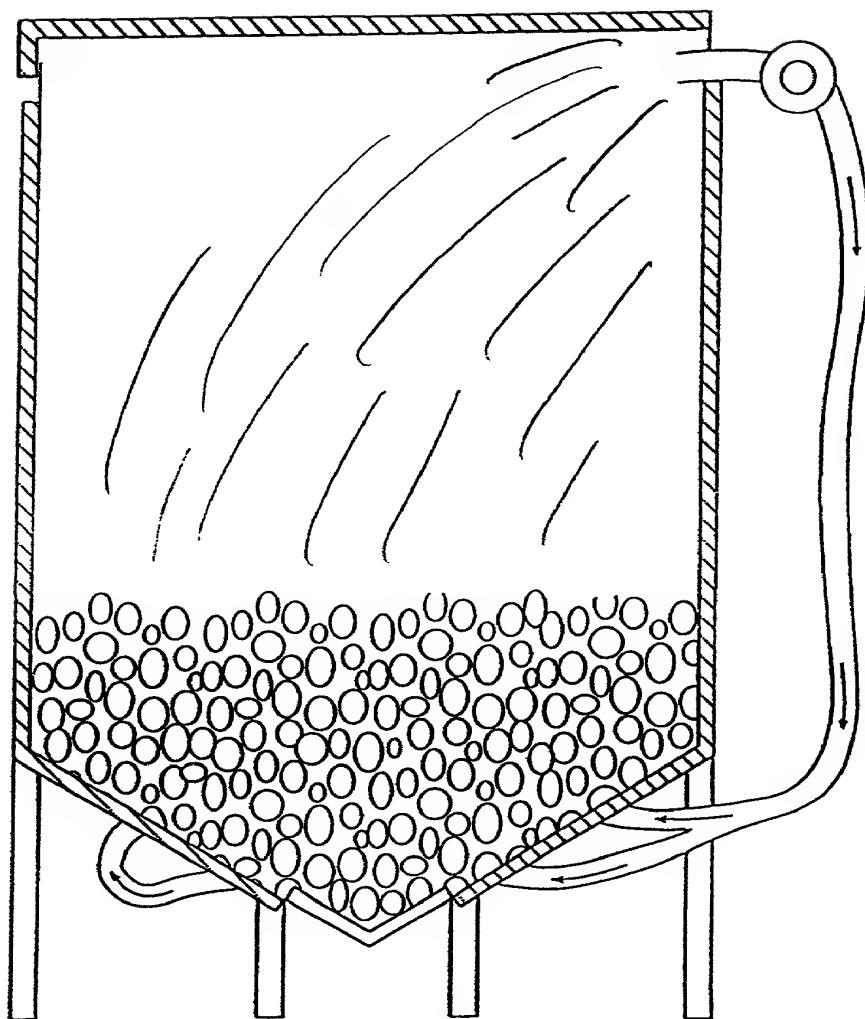


FIG. 11

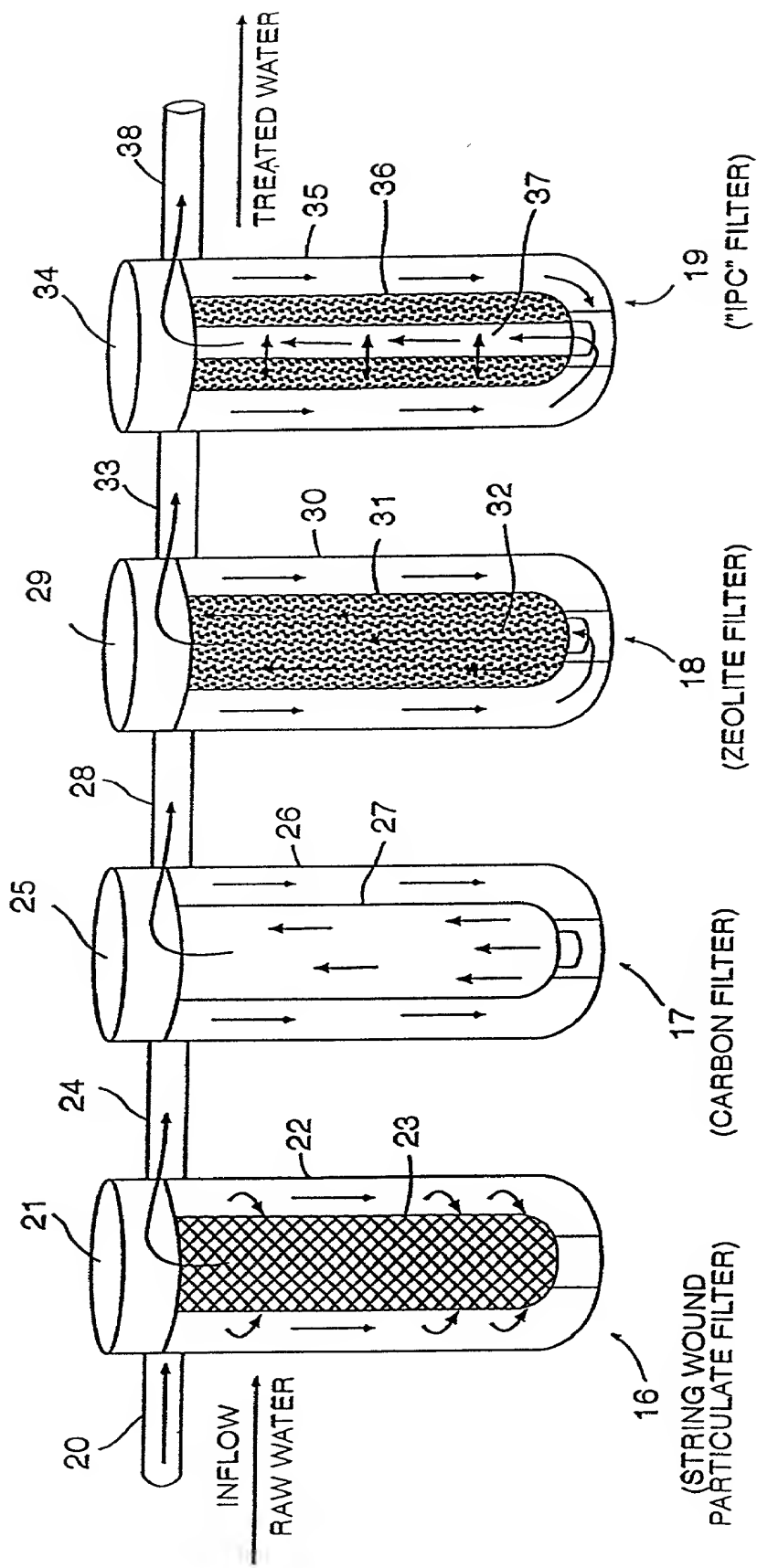


FIG. 12

FIG. 26 13

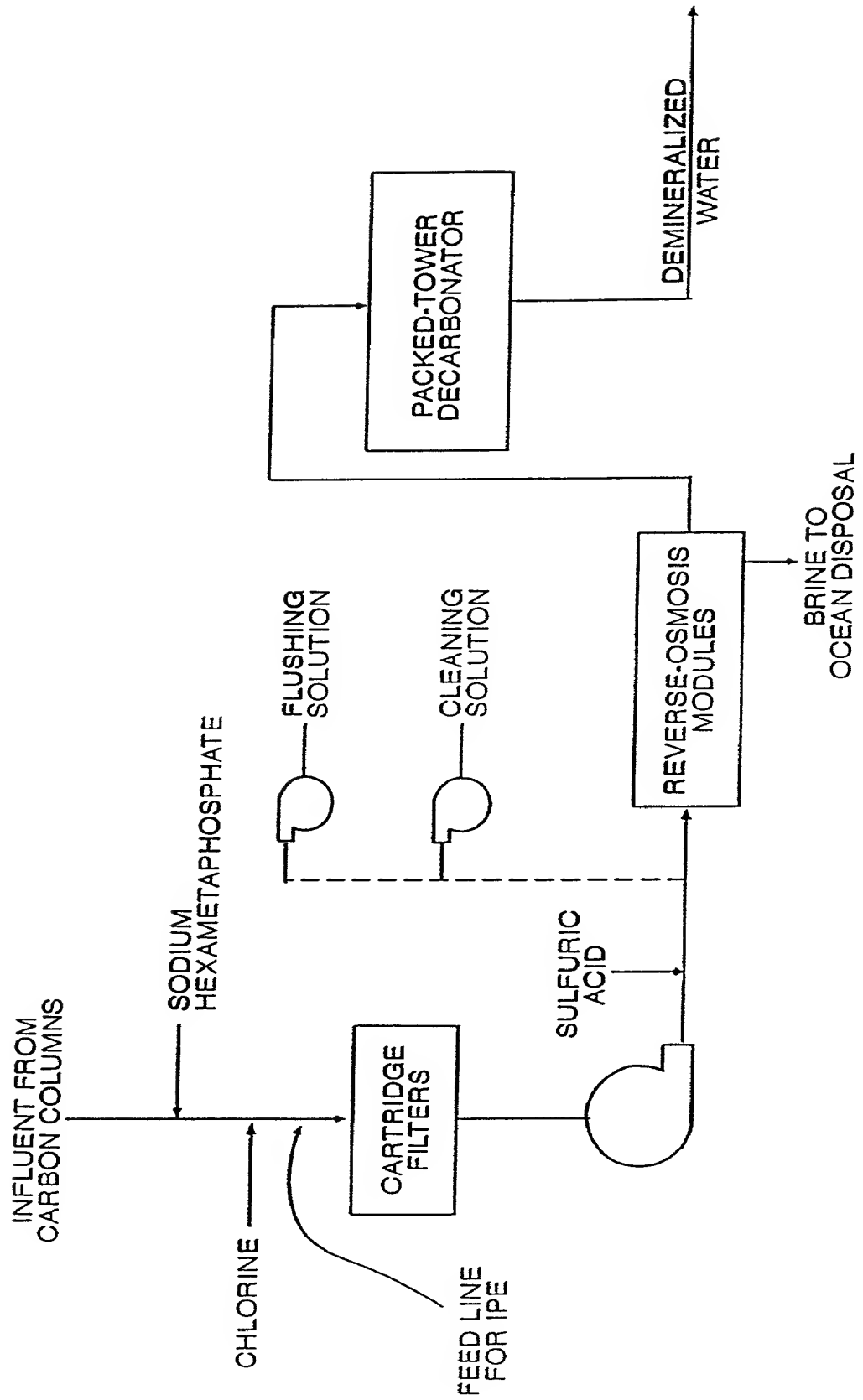


FIG. 26 13

HOME WATER SOFTENER, WITH AUTOMATIC CONTROLLER FOR REGENERATION AND SERVICE IPC CONVERSION

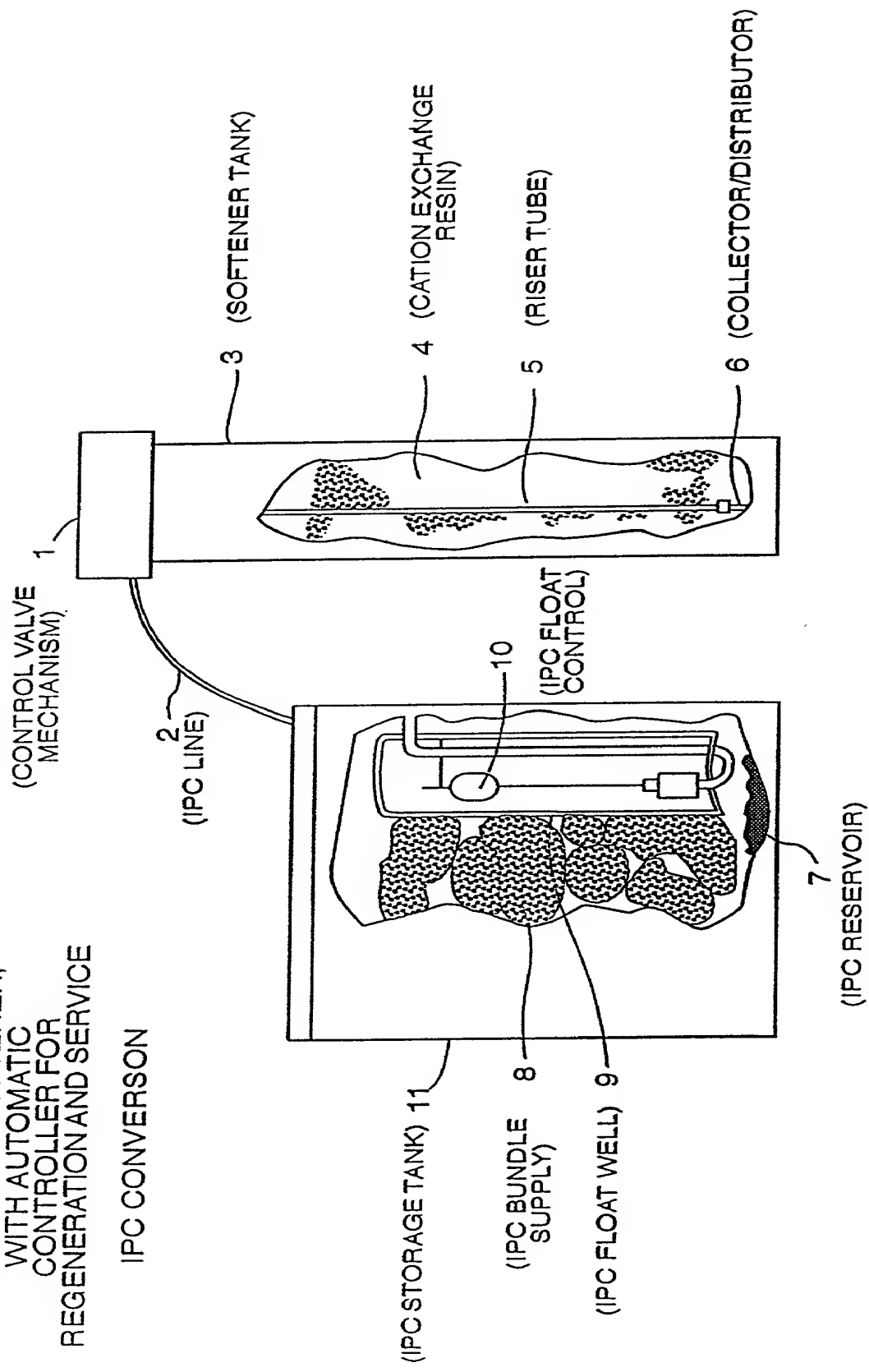


FIG. 14

FIG. 15 is a schematic diagram of a water treatment system. The system includes a pump (19) connected to a float valve (18) and a deionized reserve tank for regeneration (17). The tank (17) is connected to a counter current scrubber (14) and an IPC canister (13). The scrubber (14) is connected to a series of three cation resin beds (21, 22, 23) and an outflow (20). The canister (13) is connected to an inflow (12) and an outflow (26). The tank (17) also has a cross-section (15a) and a cross-section (15b) shown separately.

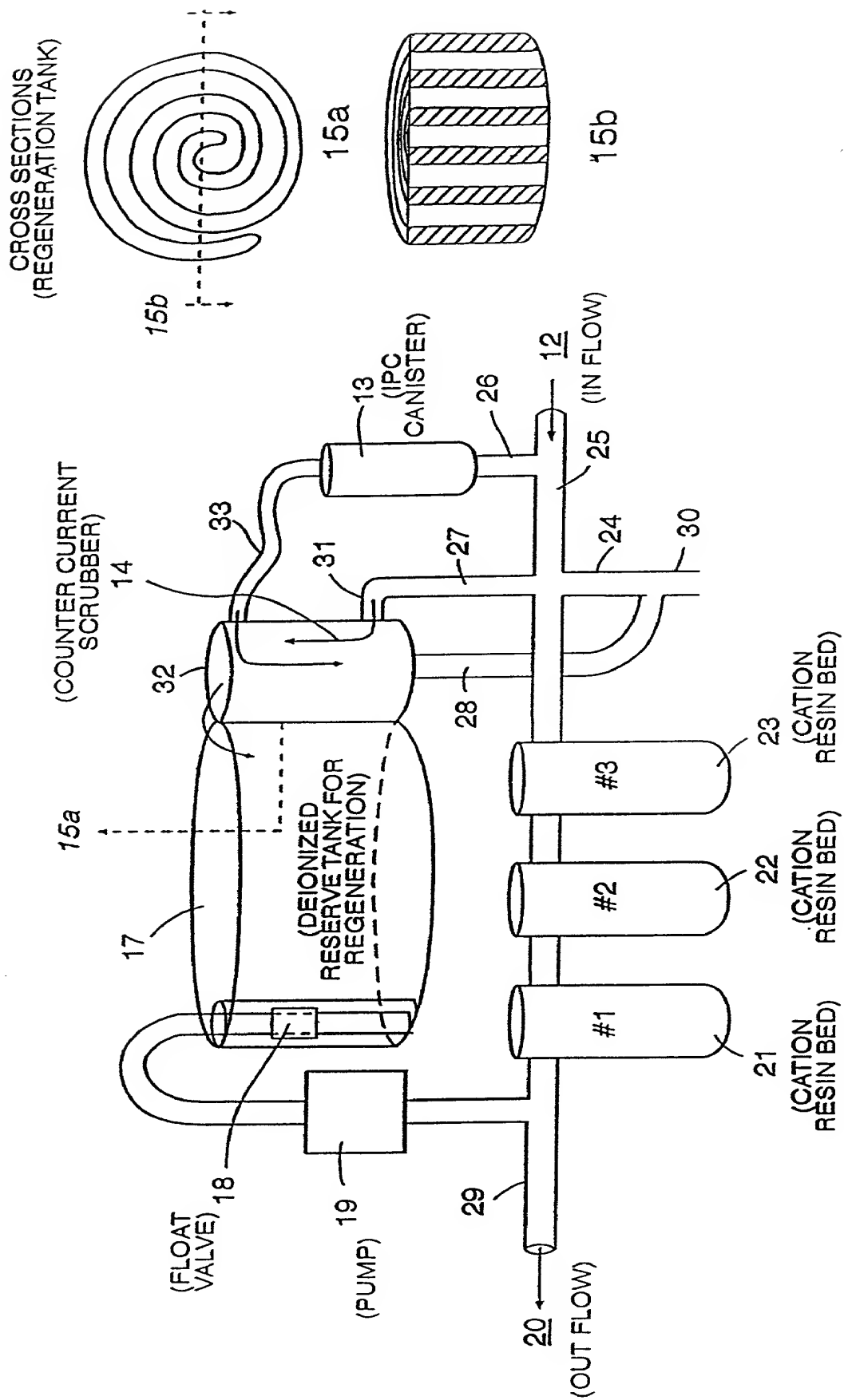


FIG. 15

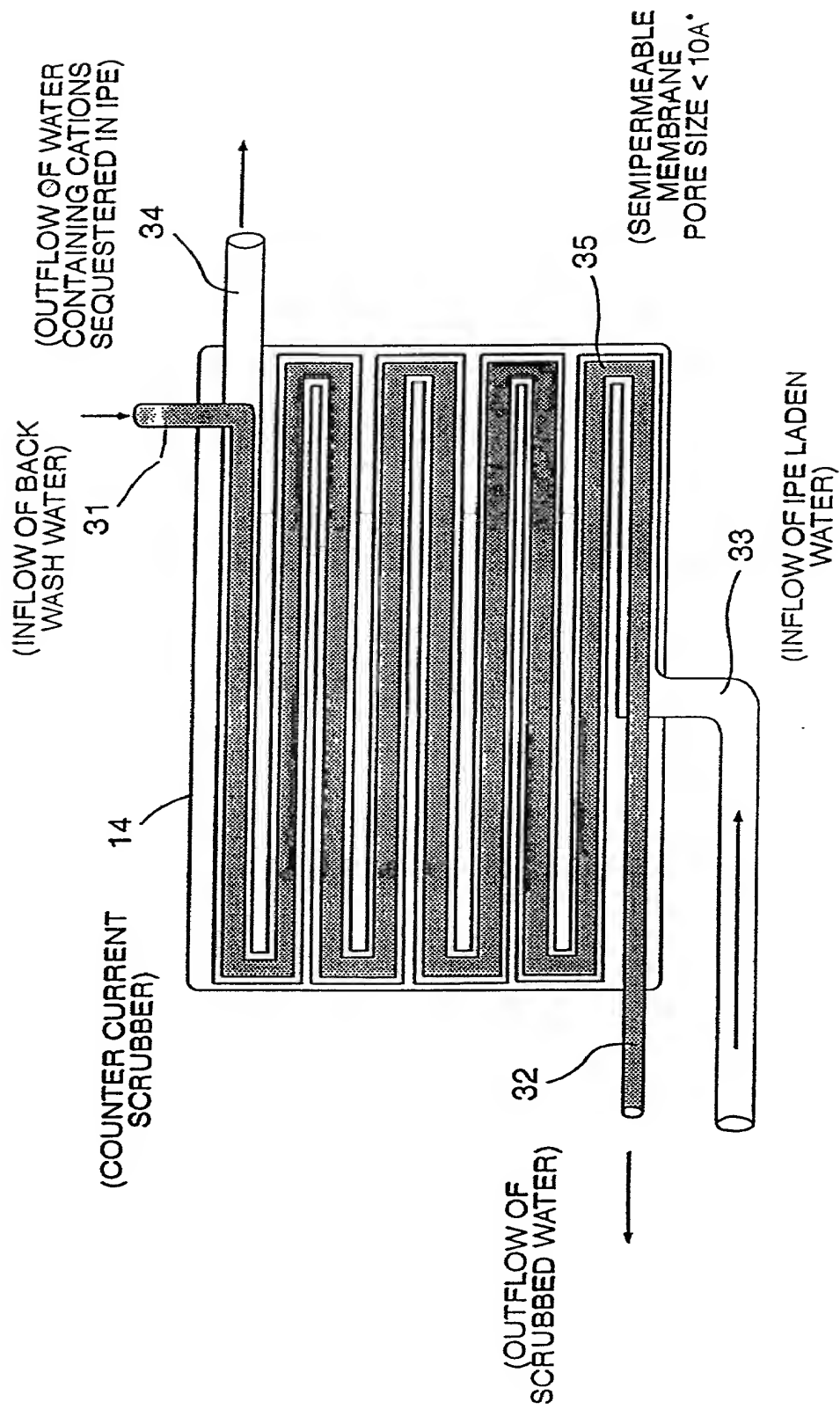


FIG. 16

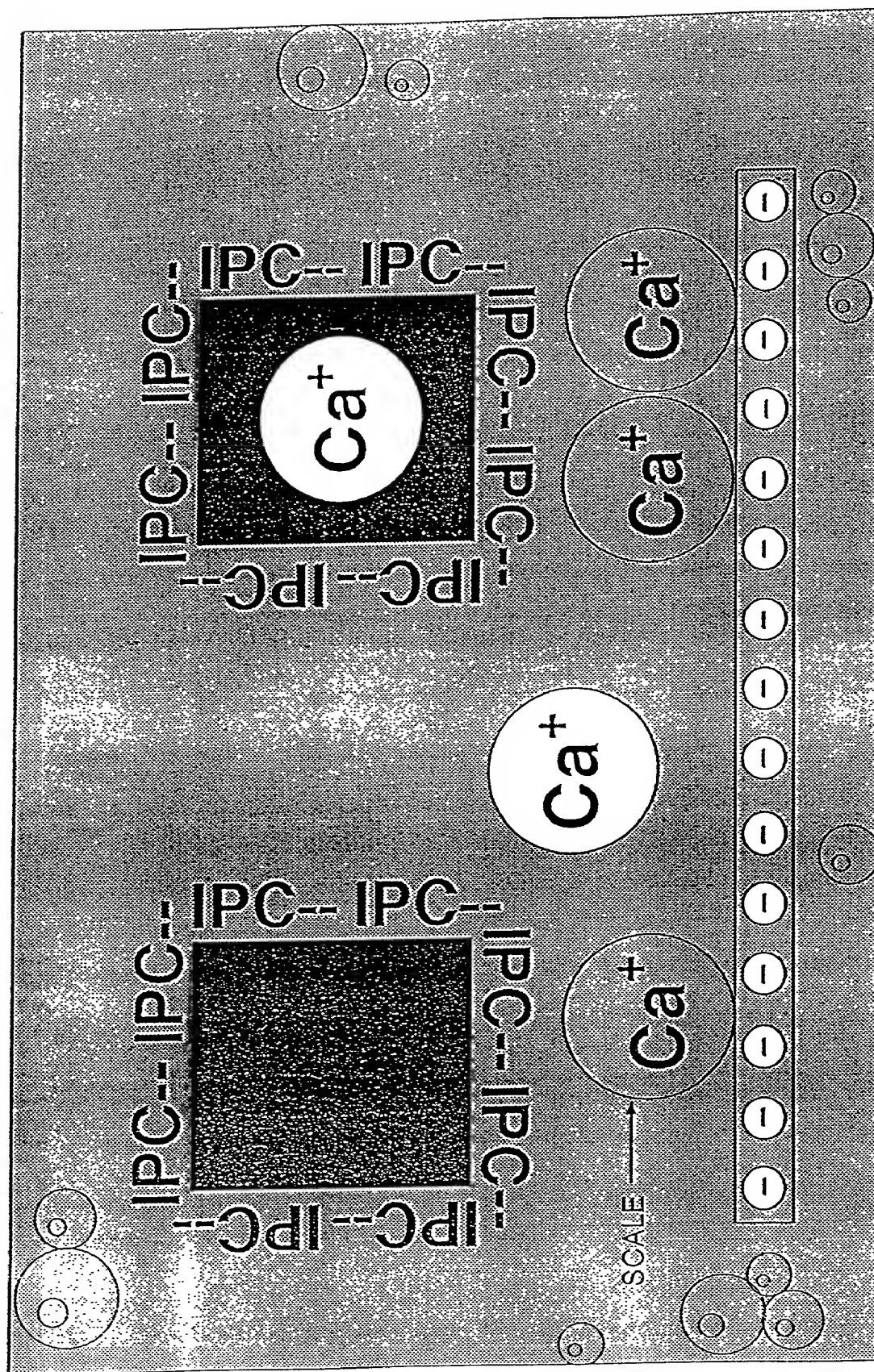


FIG. 17

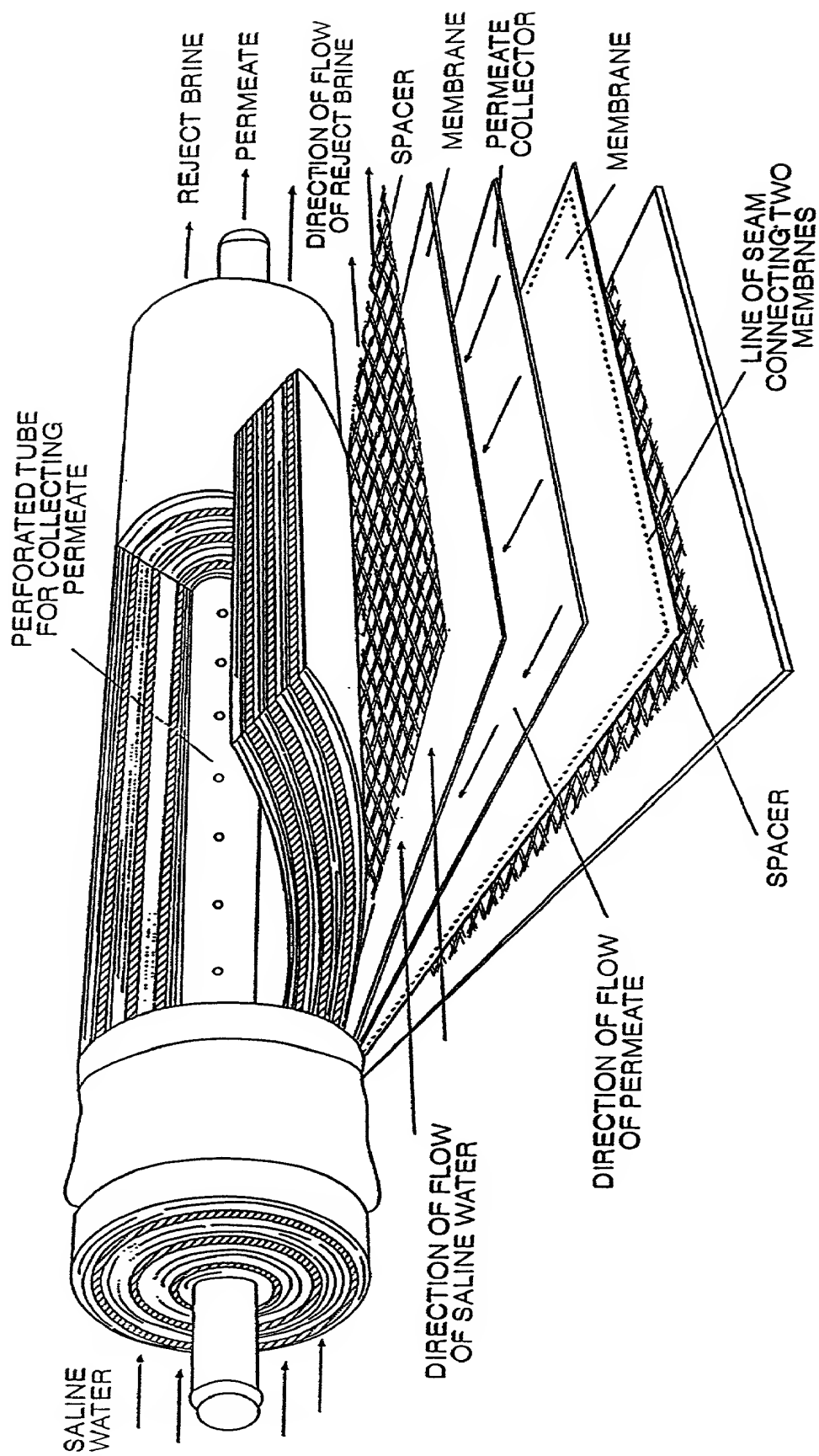


FIG. 18

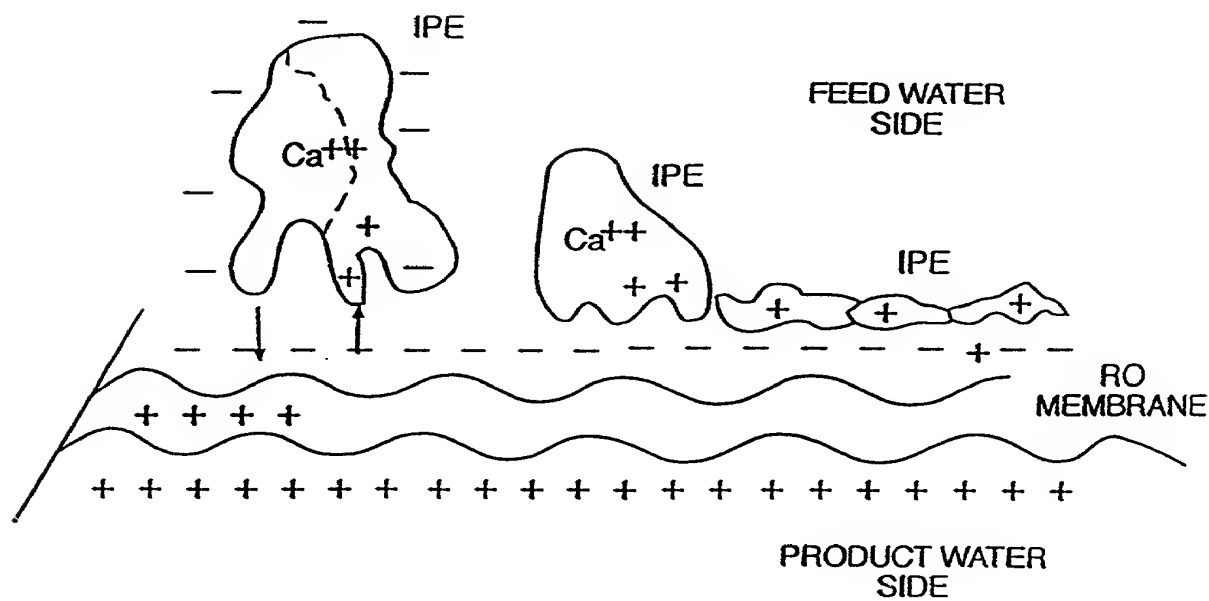
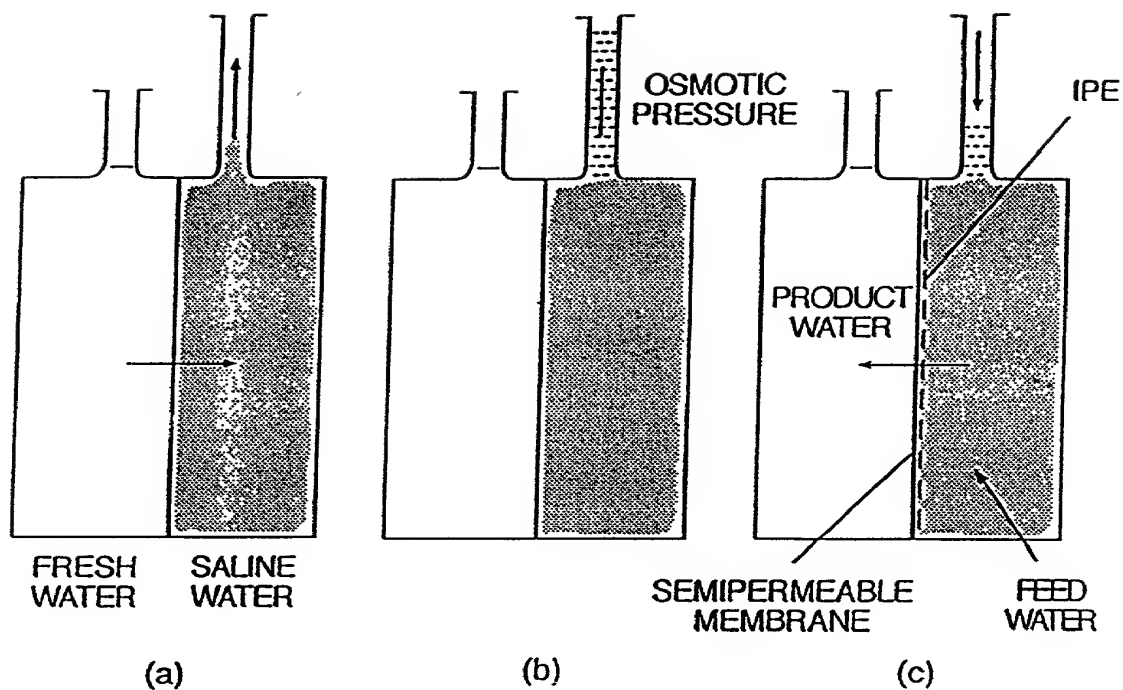


FIG. 19